NEGATIVE PHOTORESIST COMPOSITION INVOLVING NON-CROSSLINKING CHEMISTRY

Abstract of the Disclosure

A negative photoresist composition and a method of patterning a substrate through use of the negative photoresist composition. The composition includes: a radiation sensitive acid generator; an additive; and a resist polymer derived from at least one first monomer including a hydroxy group. The first monomer may be acidic or approximately pH neutral. The resist polymer may be further derived from a second monomer having an aqueous base soluble moiety. The additive may include one or more alicyclic structures. The acid generator is adapted to generate an acid upon exposure to radiation. The resist polymer is adapted to chemically react with the additive in the presence of the acid to generate a non-crosslinking reaction product that is insoluble in an aqueous alkaline developer solution.